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PREDATION BY BOYD'S FOREST DRAGON ON BIRDS CAUGHT IN MIST NETS

This note reports instances of confirmed and likely predation by Boyd's Forest Dragon *Gonocephalus boydii* on birds caught in mist nets set in rainforests of north-eastern Queensland. Instances of predation on birds caught in mist nets are not often published (but see, for example, Recher *et al.* 1985). I hope that by reporting these cases I might alert other bird banders to be especially aware of the possibility of this form of mortality.

Five instances of predation are here reported. In each case the dead bird was preserved as a voucher study skin and lodged in the Queensland Museum; tissues (heart, liver and breast muscle) were taken and preserved in liquid nitrogen (four cases) or 70 per cent alcohol and will ultimately be lodged with the collection of the CSIRO, Division of Wildlife and Ecology, Canberra.

On 20 November 1991 while mist-netting in a fragment of rainforest ca. 3 km north-east of Millaa Millaa, three Mountain Thornbills *Acanthiza katherina* were found dead at ground level in a mist net. Their heads had been crushed and had the appearance of having been sucked. The nets had been left for no more than between 20 and 30 minutes since last being checked.

On 4 December 1991 while mist-netting at Roaring Meg Creek ca. 5 km west of Cape Tribulation another Mountain Thornbill was found dead in a mist net. Again the head was crushed but no more than 20 minutes had passed since the nets were last checked. The net was closed immediately as our departure from the site was imminent anyway.

On 6 December 1991 while mist-netting at the Windsor Tableland (16°18'S, 145°05'E) a Boyd's Forest Dragon was found attacking a Fernwren *Oreoscopus gutturalis* caught in the bottom of a net. It was crushing the bird's head and the bird was already dead when found. The net had been open no more than 20 minutes. The dragon

remained near the site of the net for a short time but the net was immediately closed.

Given that a Boyd's Forest Dragon was found attacking a Fernwren in exactly the same manner in which the Mountain Thornbills had been killed, it seems reasonable to suppose that the same species of dragon may well have killed the Mountain Thornbills. Conceivably, however, an Eastern Water Dragon *Physignathus leonurus* could have been the predator at Roaring Meg Creek as the net was close to a small creek with rock and small boulders scattered along its course.

Even if mist nets are set slightly above the ground in rainforest, Boyd's Forest Dragons could still attack small birds caught in the bottom of the lowest rung. Bird banders need to be especially vigilant to minimise or avoid altogether this form of mortality to birds.

My purpose in mist-netting was to capture ground-dwelling birds so the bottom rungs of nets were intentionally set at ground level. In the course of this project, the mist-netting for which is now complete, I have netted some 400 birds and only two other instances of mortality in the nets were recorded: (a) a Large-billed Scrubwren *Sericornis magnirostris* caught at about 1.6 m

above ground level was killed, perhaps by a Black Butcherbird *Cracticus quoyi* and (b) a second Large-billed Scrubwren caught at the bottom of a net was presumably overlooked in only one round of checking the nets due to its lying motionless at ground level in relatively cold and dark conditions.

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A POSSIBLE CASE OF INTRA-SPECIFIC BROOD PARASITISM IN THE BELL MINER

Intra-specific brood parasitism has never been reported for the Bell Miner *Manorina melanophrys* (Smith and Robertson 1978; Clarke 1988). The distribution of clutch sizes is unimodal with clutches of two eggs accounting for 88.8 per cent of all the clutches ($n = 134$) at Healesville. Clutches of three are occasionally (6%) laid but: (a) are restricted to the peak of the breeding season, (b) are laid in the typical one egg/day sequence, and (c) are quite homogeneous in shape, hence they are not necessarily the product of two females.

On 1 March 1991 (end of breeding season), I found a nest in the Sir Colin Mackenzie Zoological Park at Healesville, southeastern Victoria. The nest contained four eggs all of which were at a

similar stage of incubation and at least six days old. It was possible to divide the eggs into two sets according to their markings and background colour. One pair (A) of eggs had a uniform dark-pink background with brown spots distributed all over the surface. The second pair (B) had a surface of very pale-pink uniformly distributed over the pointed half of the egg, without any spots, whereas the blunt half of the egg had a dark-pink background with brown spots distributed all over. These differences in egg colour suggest that they were the product of two females.

Egg shape in the Bell Miner (measured as L/B, where L = egg length in cm and B = egg breadth in cm) varies amongst females (Poiani 1992). Therefore, if one set of eggs was the product of egg dumping they may differ in shape from the second pair. The values of egg measurements were as follows. Length: $A_1 = 2.11$, $A_2 = 2.03$, $B_1 = 2.20$, $B_2 = 2.22$; breadth: $A_1 = 1.59$, $A_2 = 1.55$, $B_1 = 1.61$, $B_2 = 1.64$. The precision of the measurements was 0.01 cm and